

2005 IAP

Hunter Army Airfield

Installation Action Plan



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2005 IAP

Hunter Army Airfield

Georgia



Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Installation Restoration Program (IRP) for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

The IRP is specifically focused on contamination resulting from past activities, and is funded by the centrally-managed Environmental Restoration, Army (ER,A) budget account. Cleanup activities directed at contamination primarily resulting from current operations are separately funded and managed, and, although mentioned where relevant, will not generally be discussed in detail in this IAP.

All site specific funding and schedule information has been prepared according to projected overall Army funding levels and is therefore subject to change. Under current project funding, all remedies will be in place with the exception of HAA-15, at Hunter Army Airfield by the end of 2006. Remedy in place at HAA-15 is dependent upon contract negotiations with regulatory authorities.

The following agencies contributed to the formulation and completion of this Installation Action Plan for Hunter Army Airfield during a planning workshop held on 18-19 February 2004:

Engineering and Environment, Inc,

Fort Stewart and Hunter Army Airfield

GEPD

US Army Environmental Center

US Army Corps of Engineers, Savannah

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Acronyms & Abbreviations

AAFES	Army, Air Force Exchange Services
ACL	Alternate Concentration Level
ACSIM	Assistant Chief of Staff for Installation Management
AEDB-R	Army Environmental Database-Restoration
ARARs	Applicable or relevant and appropriate requirements
AST	Aboveground Storage Tank
AVGAS	Aviation Gasoline
bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CA	Corrective Action
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CO	Consent Order
COE	U.S. Army Corps of Engineers
COL	Colonel
CSR	Compliance Status Report
CY	Cubic Yards
DA	Department of Army
DAACG	Departure/Arrival Air Control Group
DCE	1,2-Dichloroethylene
DD	Decision Document
DERA	Defense Environmental Restoration Account (currently called ER,A)
DNAPL	Dense non-aqueous phase liquid
DPW	Directorate of Public Works
DRMO	Defense Reutilization & Marketing Office
EN	Engineer
ENRD	Environmental Natural Resources Division
EPA	United States Environmental Protection Agency
ER,A	Environmental Restoration, Army (formerly called DERA)
FRA	Final Remedial Action
FS	Feasibility Study
FY	Fiscal Year
GEPD	Georgia Department of Natural Resources, Environmental Protection Division
GW	Groundwater
HAA	Hunter Army Airfield designation in AEDB-R
HAAF	Hunter Army Airfield
HQ	Headquarters
HSI	Hazardous Site Inventory
HSRA	Hazardous Site Response Act
IAP	Installation Action Plan
IR	Information Repositories
IRA	Interim Remedial Action
IRP	Installation Restoration Program
IWQS	In Stream Water Quality Standards
JP-4	Jet Propellant Number Four

JP-8	Jet Propellant Number Eight
LNAPL	Light non-aqueous phase liquid
LTM	Long Term Monitoring
MCA	Military Construction Account
MCL	Maximum Contaminant Level
MILCON	Military Construction
MNA	Monitored Natural Attenuation
MOGAS	Motor Gasoline
MW	Monitoring Well
NE	Not Evaluated
NFA	No Further Action
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
OMA	Operations and Maintenance - Army
OWS	Oil and Water Separator
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PBC	Performance Based Contracting
PCB	Polychlorinated Biphenyls
PCE	Perchloroethylene
PDO	Property Disposal Office
PH	Pump House
POL	Petroleum, Oil and Lubricants
POM	Program, Operation, Management
PPB	Parts Per Billion
PPM	Parts Per Million
PY	Prior Year
QTR	Quarter
RA	Remedial Action
RA(C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REM	Removal
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy in Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
S&A	Supervision and Administration
S&R	Supervision and Remediation
SI	Site Inspection
STP	Sewage Treatment Plant
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee

Acronyms & Abbreviations

TSCA	Toxic Substances Control Act
ug/L	Micrograms per liter
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Center
USAEHA	United States Army Environmental Hygiene Agency (currently called USACHPPM)
USAF	U.S. Air Force
USATHAMA	United States Army Toxic and Hazardous Material Agency (currently called USAEC)
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
USTMP	UST Management Program
VOC	Volatile Organic Compounds

Status:	No NPL sites have been identified at Hunter Army Airfield.
Number of AEDB-R Sites:	18 AEDB-R sites 7 Active ER,A Eligible Sites 9 ER,A Response Complete Sites 2 Non-ER,A Response Complete Sites
Different Site Types:	1 Fire/Crash Training Area 3 Contaminated Ground Water 1 Landfill 1 Oil Water Separator 1 Storage Area 3 Spill Site Areas 2 Above Ground Storage Tanks 5 Underground Storage Tanks 1 Waste Treatment Plant
Contaminants of Concern:	VOCs, SVOCs, TPH, Pesticides, PCBs
Media of Concern:	Soil, Groundwater, Surface Water, Sediment
Completed REM/IRA/RA:	<ul style="list-style-type: none"> • Removal of USTs at Bldg 728 (HAA-03) \$300,000 • Removal of USTs and remediation of contaminated soil and groundwater at Bldg 133 (HAA-03B) \$3,000,000 • Removal of 5000cy of contaminated soil at the Fire Training Area (HAA-01) \$875,116 • Removal of 30 USTs at Pump Houses #1, #2 and #6 (HAA-13) and in-place closure of associated pipelines and two additional USTs \$500,000 • Removal of free product at Fire Training Area (HAA-01), Bldg 728 (HAA-03), Bldg 133 (HAA-03B), Pump Station #1, #2 (HAA-13) • Bldgs 1336 and 1327 (HAA-14) • Bldg 133 source removal (HAA-03B) \$80,000
RA Five-Year Review:	Installation-wide five year reviews will begin in FY05, and are funded under HAA-09 (includes sites HAA-01, -09, -13, -14, -15).
Current IRP Phases:	RI/FS at 1 site RA(O) at 6 sites
Projected IRP Phases:	RA(O) at 4 sites LTM at 2 sites
Identified Possible REM/IRA/RA:	<ul style="list-style-type: none"> • HAA-13 - free product removal • HAA-03B, 15 - in situ treatment
Duration:	Year of IRP Inception: 1983 Year of IRP Completion Excluding LTM: 2006 Year of IRP Completion Including LTM: 2015

Installation Information

SITE DESCRIPTION:

Hunter Army Airfield (HAAF) is located on 5,400 acres of land in Chatham County, Georgia, in the southwestern part of Savannah. The airfield is bounded on the north by lightly populated areas, on the east and south by residential and light commercial areas, and on the west by the Little Ogeechee River.

COMMAND ORGANIZATION:

ACSIM (Assistant Chief of Staff for Installation Management)

Installation: Fort Stewart, Directorate of Public Works,
Environmental and Natural Resources Division

Subinstallation: Hunter Army Airfield

IRP EXECUTING AGENCIES:

- U.S. Army Corps of Engineers, South Atlantic Division-Savannah District

REGULATORY PARTICIPATION:

FEDERAL: U.S. Environmental Protection Agency, Region IV

STATE: Georgia Department of Natural Resources, Environmental Protection Division

- RCRA Compliance Group: Subpart B Permit, Subpart X Permit, CO SWMUs
- HSRA Compliance Group: HAA-01, 15, 16
- USTMP: All existing and former USTs (HAA-03, 03B, 03C, 09, 13, 14)

REGULATORY STATUS:

- In February 1994, a consent order agreement was signed and includes violations at HAA-12.
- Public water system operation permits:
Main System (Expiration Date: May 31, 2008).
Noncommunity Systems (Expiration Date: March 6, 2005).
- Boiler operation permit (Expiration Date: None) Title V Permit Application currently under review.
- NPDES Permit: Wastewater Treatment Plant (Expiration Date: Feb 28, 2006).

MAJOR CHANGES TO IAP FROM PREVIOUS YEAR (FY04):

- Hunter Army Airfield has implemented Performance Based Contracting (PBC).

Installation Information

LOCATION:

The Fort Stewart/Hunter Army Airfield complex, home of the 3d Infantry Division (Mechanized) - the Marne Division, is located in southeast Georgia's "Coastal Empire."

The Fort Stewart/Hunter Army Airfield complex is comprised of approximately 48,000 soldiers, family members, and civilian employees. Hunter Army Airfield is an Aerial Port of Embarkation and houses divisional, XVIII Airborne Corps, and tenant units, serving as the Southeast Sector Power Projection Platform.

Hunter Army Airfield (HAAF) has the Army's longest runway. HAAF is located along the western edge of the City of Savannah, Chatham County, and contains 5,370 acres. HAAF is easily accessible from I-16 via Interstate Connector 516 and from I-95 via Georgia State Route 204.

Fort Stewart and HAAF cantonment areas are 40 miles apart and are conveniently connected by U.S. Highway 80, I-95, and Georgia State Route 204. The Division's 3d Brigade and its supporting units are stationed at Fort Benning, Georgia.

HISTORY:

Fort Stewart became a Flight Training Center in 1966, and HAAF was acquired from the U.S. Air Force (USAF) in 1967 to support the increased need for helicopter pilot training during the Vietnam Conflict. Advanced helicopter training for Vietnamese Air Force flight students was conducted at HAAF from 1970 to 1972. Aviation training was phased out in 1973 when all aviation training was consolidated at Fort Rucker, Alabama. The 1st Battalion, 75th Infantry was activated on January 31, 1974, and Fort Stewart became a training and maneuver area providing tank, field artillery, helicopter gunnery, and small arms training for regular Army and National Guard units.

HAAF currently provides support facilities, conducts training opportunities, and assists in the mobilization and deployment of the 3d Infantry Division (Mechanized). The 24th Infantry Division (Mechanized) was formerly stationed at Fort Stewart in 1975 and was active during the Persian Gulf War in 1991. It was reflagged as the 3d Infantry Division in May 1996.

Fort Stewart filed a Resource Conservation and Recovery Act (RCRA) notification form with the EPA for Fort Stewart and HAAF in July 1980. A RCRA Part A permit application for interim status as a generator and storage facility was filed in November 1980. Subsequently, HAAF obtained a Part A permit and was under interim status as a hazardous waste generation and storage facility. In 1983, EPA directed HAAF to file a RCRA Part B permit application and conducted a compliance inspection of HAAF. Following the compliance inspection, EPA advised the Department of Public Works (DPW) personnel to withdraw the Part B permit application for HAAF because hazardous wastes generated at HAAF are transferred to the Defense Reutilization and Marketing Office (DRMO) storage yard at Fort Stewart. Due to this fact, EPA ruled that HAAF did not require a Part A or B permit. The Part B permit for Fort Stewart was revised to include quantities of

MISSION:

The mission of the Fort Stewart/Hunter Army Airfield complex is to sustain a quality of life and installation support at the level necessary for division, non-divisional, tenant, and reserve component units to accomplish their training mission.

Contamination Assessment

OVERVIEW

The E,RA program at HAAF focuses on investigation and remediation of eligible sites where contamination occurred due to past practices and activities conducted at the airfield. Currently, the Installation has identified sixteen of the eighteen AEDB-R sites as eligible for ER,A funding. Of the sixteen sites, nine are response complete (RC) and seven are active ER,A sites. The active ER,A sites include the Fire Training Site (HAA-01), Former USTs at Building 728 (HAA-03), Former USTs at Building 133 (HAA-03B), Bulk Fuel Facility (HAA-09), Former PDO Facility (HAA-12), Pump Houses #1, #2, and #6 (HAA-13), and the MCA Barracks site (HAA-15). The RC sites are HAA-02, 03C, 06, 07, 08, 10, 11, 14 and 16. The non-ER,A eligible sites are HAA-04 and HAA-05.

The majority of these sites (i.e., HAA-01, 03, 03B, 9, 12, 13, and 14) are primarily contaminated with petroleum hydrocarbons due to operations of the extensive fueling systems (i.e., storage, product delivery lines, and other components) that were required to support a Strategic Air Command Facility (pre-1960s) and an Army Airfield (post-1960s). These fueling systems were part of bulk tank farms, motorpool service stations, AAFES service stations, and miscellaneous support activities. Unfortunately, due to their age and lack of proper maintenance, releases to the environment have subsequently resulted. The primary contaminants of concern at these sites are BTEX and PAHs, but many sites (i.e., HAA-01, 03, 03B, and 13) also contain free phase product (i.e., LNAPL).

In addition, extensive chlorinated solvent contamination has been identified at HAAF since 1998. These sites (HAA-12, 14, 15 and 16) have been contaminated due primarily to improper maintenance practices prior to the 1970s and will require extensive investigation to determine the extent of subsurface impact and remediation to MCLs.

Beginning in the early 1980s, HAAF began implementation of numerous measures to ensure that current activities do not result in releases to the environment. The primary industrial wastes generated at HAAF are those associated with vehicle and aircraft maintenance. The waste stream includes used lubricating oil, hydraulic fluid, degreasing solvent, scrap metal, wire, and waste asbestos. Other wastes which are generated on the post include waste acid, lead-based paint, waste paint, paint sludge, polychlorinated biphenyls (PCBs) in transformer oil, plastics, pesticides, herbicides, sanitary wastes, and construction debris. USTs, which are located at a limited number of motorpools, are currently used for storage of used oil, used hydraulic fluid, used antifreeze, mogas, and JP-8. At most motorpools, aboveground storage tanks (ASTs) are used in lieu of USTs and are being utilized for the same purposes. If the UST/AST is being used to store a waste product, then a contractor disposes the UST/AST contents on a regular basis. If these wastes meet the Fort Stewart permit requirements, they are transported to Fort Stewart and burned as a fuel source at the Central Energy Plant (SWMU 21).

In the mid-1970s, oil/water separators were installed at the vehicle washracks on HAAF. Prior to that time, washrack wastewater was discharged untreated to the storm water drainage system. When the separators were installed, the separator effluent lines were directed to the storm drainage system. In 1986, the oil/water separator discharge lines were connected to the sanitary sewer system.

Wastewater which was formerly treated at three smaller sewage treatment plants (STPs) on the installation is now diverted to the main STP. In the past, dewatered sludge was disposed of in the base sanitary landfill, which was closed in 1980. The sludge is currently disposed of in a Subtitle D permitted landfill that is owned and operated by Waste Management, Inc. In 1991, effluent from the STP was routed to allow discharge in the Savannah River via the City of Savannah's Wilshire Street STP.

There are two landfills on HAAF, one of which is closed. The original post landfill was open from 1941 through 1980 and was used for the disposal of non-hazardous scrap metals that had no salvage value. Since 1980, all of the

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Contamination Assessment

OVERVIEW, continued

non-salvageable scrap metal has been transported to the City of Savannah Sanitary Landfill. A second landfill is currently in operation and is used only for inert construction debris.

In 1998, the Bulk Fuel Facility began a complete rehab and upgrade to meet 21st century standards and to ensure the facility's operating life will continue for another 50 years. The rehabbed facility has numerous "checks and balances" to ensure that failures are immediately recognized and corrected to prevent future impact to the environment. In addition, HAAF will continue to implement measures in the 21st century throughout the Installation to ensure our military missions are conducted to ensure stewardship of the environment.

Contamination Assessment

PREVIOUS STUDIES

Title	Author	Date
Solid Waste Disposal Study of HAAF, Savannah, Georgia, Contract No. DACA-21-80-C-0111	Gulf Tex Engineers, Inc	Mar-82
Installation Assessment of HQ, 24th Infantry Division and Fort Stewart, Georgia, Report No. 334	ESE, Inc.	Oct-83
Hazardous Waste Study, No. 37-26-0127-88, Fort Stewart, Georgia	Army Environmental Hygiene Agency (AEHA)	Mar-87
AEHA Environmental Program Review, No. 31-24-7038-89	Army Toxic and Hazardous Materials Agency (USATHAMA)	Aug-88
Property Report	Army Toxic and Hazardous Materials Agency (USATHAMA)	1988
Tracer Leak Test for Five Underground Storage Tanks, HAAF	Tracer Research Corporation	Mar-90
Tracer Tight Leak Test of Four Underground Storage Tanks, HAAF	Tracer Research Corporation	Mar-90
Shallow Soil Gas Investigation, HAAF, Buildings 133 and 710, Savannah, Georgia	Tracer Research Corporation	Jul-90
Tracer Tight Leak Test of Two Underground Storage Tanks, HAAF	Tracer Research Corporation	Jul-90
Synthetic Organic Chemicals Survey	HSHB-ME-WR	Aug-90
Contamination Evaluation/Closure Plan, Fort Stewart Fire Training Areas	Hunter/ESE	Oct-90
Phase II Site Investigation, Tactical Equipment Shop Refueling Station, Building 1343 Draft	Army-COE, Savannah District	Apr-91
Design Recommendation Report, Subsurface Remediation at the HAAF Base Gas Station	RMT, Inc.	Jun-91
Corrective Action Plan, HAAF Building 710, Contract No. DACA-21-91-D-001	Atlanta Testing and Engineering	Oct-91
Field Report, Delivery Order #33 for Removal of USTs at Building 728 and an emergency generator tank at 117th Air National Guard	Anderson Columbia Environmental, Inc.	Oct-94
Engineering Remediation Report for Underground Storage Tank Removal, Building 710	Phoenix Construction Services, Inc.	Jan-95
Field Report, Delivery Order #76 for Removal of USTs at Pump Houses #1 and #2	Anderson Columbia Environmental, Inc.	Apr-95
Underground Storage Tank Closure Report, Building 133	Aneptek Corporation	May-95
Engineering Remediation Report, Underground Storage Tank Removal and Phase II Interim Remediation (Building 133), Hunter Army Airfield, Savannah, Georgia	Aneptek Corporation	Jun-95
100 Percent Submittal Construction Specifications for Source Removal Action, Hunter Army Airfield-Fire Training Area, Savannah, Georgia	LAW Engineering	Mar-96
Final Completion Report, Former Building 133, EPD Facility No. 9025029	Metcalf and Eddy	Jun-96
Final Completion Report, Former Building 710, EPD Facility No. 9025029	Metcalf and Eddy	Jun-96
Final Corrective Action Plan-Part A, Phase I Site Investigation of the Airport Hydrant System (Building 728), Facility Id. No. 9025035 and 9025049	Metcalf and Eddy	Aug-96
Final Corrective Action Plan Part B, DAACG Facility Area, EPD Facility No. 9025085	Metcalf and Eddy	Sep-96

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Author	Date
Closure Report for Tanks 21 and 22, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tanks 23 and 24, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tanks 27 and 28, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 98, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 104, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 108, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 110, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 111, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 112, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 115, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 116, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Closure Report for Tank 117, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	1996
Final Corrective Action Plan-Part A, Pumphouse #6, EPD Facility No. 9025090	Metcalf and Eddy	Apr-97
Final Corrective Action Plan-Part A, Pumphouse #1, EPD Facility No. 9025085	Metcalf and Eddy	Apr-97
Final Corrective Action Plan-Part A, Pumphouse #2, EPD Facility No. 9025086	Metcalf and Eddy	Apr-97
Final Compliance Status Report, Old Property Disposal (PDO) Yard, Hunter Army Airfield	Metcalf and Eddy	May-97
Final Corrective Action Plan-Part B, Building 1310, EPD Facility No. 9025073	Metcalf and Eddy	Sep-97
Final Corrective Action Plan-Part B, Former Building 728, EPD Facility No. 9025035 and 9025049	Metcalf and Eddy	Dec-97
Final Corrective Action Plan-Part B, Pumphouse #6, EPD Facility No. 9025090	Metcalf and Eddy	Jan-98
Corrective Action Plan-Part A for former HOT at Building 8593-1, HAAF, GA	Science Applications International Corporation	Sep-98
Closure Report for USTs 30, 31, and 50 (PumpHouse #1), HAAF, GA	HAZWRAP/EarthTech	Oct-98
PDO Yard Aboveground Storage Tanks Removal Report	HAZWRAP/EarthTech	Nov-98
Closure Report for USTs #40-#41 (PumpHouse #2), HAAF, GA	HAZWRAP/EarthTech	Dec-98
Closure Report for USTs #82-#92 (PumpHouse #6), HAAF, GA	HAZWRAP/EarthTech	Dec-98
Corrective Action Plan-Part A for Heating Oil Tank (HOT) at Bldg 725, HAAF, GA	Science Applications International Corporation	Jan-99
Corrective Action Plan-Part A for UST #109, HAAF, GA	Science Applications International Corporation	Feb-99
Corrective Action Plan-Part A for UST #112, HAAF, GA	Science Applications International Corporation	Feb-99
Corrective Action Plan-Part A for UST #116, HAAF, GA	Science Applications International Corporation	Feb-99
Corrective Action Plan-Part A for Heating Oil Tanks (HOTs) at Bldg 850 , HAAF, GA	Science Applications International Corporation	Feb-99
Corrective Action Plan-Part A for USTs #25 and #26, HAAF, GA	HAZWRAP/EarthTech	Mar-99
Corrective Action Plan-Part A for UST #108, HAAF, GA	Science Applications International Corporation	Mar-99

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Author	Date
Corrective Action Plan-Part A for USTs #21 & #22, HAAF, GA	Science Applications International Corporation	Mar-99
Corrective Action Plan-Part A for USTs #27 & #28, HAAF, GA	Science Applications International Corporation	Mar-99
Third Annual Monitoring Only Report for former USTs #17-#20, HAAF, GA	Metcalf and Eddy	May-99
Third Annual Monitoring Only Report for former USTs #118X-#123X, HAAF, GA	Metcalf and Eddy	May-99
Closure Report for UST #129, HAAF, GA	HAZWRAP/EarthTech	Jul-99
Closure Report for UST #130, HAAF, GA	HAZWRAP/EarthTech	Jul-99
Soil Gas Survey Report for the Bulk Fuel Facility (HAA-09), HAAF, GA	Science Applications International Corporation	Sep-99
Revised Final RFI Report for the Old PDO Yard	Metcalf and Eddy	Sep-99
Corrective Action Plan-Part B for UST #108, HAAF, GA	Science Applications International Corporation	Sep-99
Closure Report for UST #29, HAAF, GA	Fort Stewart DPW, Environmental Branch	Sep-99
Closure Report for UST #104, HAAF, GA	Fort Stewart DPW, Environmental Branch	Sep-99
Closure Report for UST #110, HAAF, GA	Fort Stewart DPW, Environmental Branch	Sep-99
Closure Report for UST #111, HAAF, GA	Fort Stewart DPW, Environmental Branch	Sep-99
First Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24), HAAF, GA	Metcalf and Eddy	Oct-99
Corrective Action Plan-Part B for USTs #21 and #22, HAAF, GA	Science Applications International Corporation	Oct-99
Closure Report for UST #117, HAAF, GA	Fort Stewart DPW, Environmental Branch	Oct-99
First Annual Monitoring Only Report for Bldg 728 (USTs #1-#16), HAAF, GA	Metcalf and Eddy	Nov-99
First Annual Monitoring Only Report for the Fire Training Area (HAA-01), HAAF, GA	Metcalf and Eddy	Nov-99
Corrective Action Plan-Part B for USTs #25 and #26, HAAF, GA	Science Applications International Corporation	Feb-00
Final Compliance Status Report, Fire Training Area, Hunter Army Airfield, Georgia	LAW Engineering	Mar-00
Corrective Action Plan for the Old Property Disposal (PDO) Yard, HAAF, GA	Science Applications International Corporation	Apr-00
Corrective Action Plan-Part B for PumpHouse #2, HAAF, GA	Metcalf and Eddy	May-00
Fourth Annual Monitoring Only Report for former USTs #17-#20, HAAF, GA	Science Applications International Corporation	May-00
Fourth Annual Monitoring Only Report for former USTs #118X-#123X, HAAF, GA	Science Applications International Corporation	May-00

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Author	Date
Addendum #1 to the First Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24)	Science Applications International Corporation	Jun-00
Corrective Action Plan-Part A for the Bulk Fuel Facility, HAAF, GA	Science Applications International Corporation	Jun-00
Addendum #1 to the Bldg 728 CAP-Part B Report, HAAF, GA	Science Applications International Corporation	Jul-00
Corrective Action Plan-Part B for PumpHouse #1, HAAF, GA	Science Applications International Corporation	Aug-00
Second Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24), HAAF, GA	Science Applications International Corporation	Oct-00
First Annual Monitoring Only Report for USTs 21 and 22, HAAF, GA	Science Applications International Corporation	Dec-00
Fifth Semi-Annual Monitoring Only Report for Bldg 1310	Science Applications International Corporation	Mar-01
Fifth Annual Monitoring Only Report for Bldg 133	Science Applications International Corporation	May-01
CAP-Part B for HAAF Bulk Fuel Facility	Science Applications International Corporation	Jun-01
CAP-Part B Addendum for USTs 25 and 26, HAAF	Science Applications International Corporation	Jun-01
First Progress Report for the Corrective Action at the PDO Yard	Science Applications International Corporation	Jun-01
First Annual Monitoring Only Report for USTs 25 and 26, HAAF	Science Applications International Corporation	Jul-01
IRA Former USTs #118X-123X, Former Bldg 133	EarthTech	Aug-01
Second Annual Progress Report for Bldg 728 Pilot Study	Science Applications International Corporation	Aug-01
CAP-Part B Addendum for Pumphouse #2, HAAF	Science Applications International Corporation	Sep-01
CAP B Addendum PH #1		Sep-01
Sanitary Sewer Investigation Gannam Height & Wilson Acres	EarthTech	Oct-01
Sanitary Sewer Investigation Bldg 1275, 1276, 1277 (EM Barracks)	EarthTech	Oct-01
3rd Semiannual MO TANK 25-26		Dec-01
1st Semiannual MO PH #1		Feb-02
Facilities Design, Wastewater Treatment Plant Upgrades	EarthTech	Apr-02
6th Annual MO Bldg 133		May-02
1st Pilot Study report for Pumphouse 2	SAIC	Jun-02
2nd Annual MO Tank 25-26		Jul-02
2nd Progress Report PDO Yard		Jul-02
6th Annual Monitoring Only Report for USTs 118x-123x	SAIC	Jul-02

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Author	Date
3rd Corrective Action Progress Report for the Corrective Actions at the Old PDO Yard HAAF	SAIC	Jul-02
2nd Annual Monitoring Only report for UST 25 and 26	SAIC	Jul-02
3rd Semiannual Monitoring Only report for UST 25 and 26	SAIC	Jul-02
3rd Annual Progress Report for Former Building 728	SAIC	Aug-02
1st Annual Monitoring Only Report for Pumphouse 1	SAIC	Aug-02
Semiannual Monitoring Only Report for the 21st Monitoring Event for Former UST 118x-123x	SAIC	Oct-02
1st Annual Monitoring Only Report for Former UST 117 Building 7002 Bulk Fuel Storage	SAIC	Oct-02
5th Semiannual Monitoring Only Report for UST 25 and 26	SAIC	Nov-02
3rd Semi Annual Monitoring Only Report for Pumphouse 1	SAIC	Apr-03
4th Corrective Action Plan Progress Report for the Corrective Actions at the Old PDO Yard	SAIC	Apr-03
Corrective Action Work Plan for Former USTs 118x-123x	STEP	May-03
5th Corrective Action Plan Progress Report for the Corrective Actions at the Old PDO Yard	SAIC	Jul-03
2nd Pilot Study report for Pumphouse 2	SAIC	Jul-03
1st Semiannual Monitoring Only Report for Former UST 117 Building 7002 Bulk Fuel Storage	SAIC	Aug-03

2005 IAP

Hunter Army Airfield
Active ER,A
Site Descriptions

FIRE TRAINING SITE

HAA-01

SITE DESCRIPTION

STATUS

REGULATORY: HSRA

RRSE RATING: High

CONTAMINANTS: Metals,
VOCs, SVOCs

MEDIA OF CONCERN:
Soil, Groundwater, Surface Water

COMPLETED IRP PHASE:
PA/SI, RI, 2 IRAs, RA(C)

CURRENT IRP PHASE: RA(O)

FUTURE IRP PHASE: LTM

HAA-01 is located on the northwest corner of the runway and was used until 1991 to train fire fighters in a live fire scenario. Training sessions took place ~eight times per year and utilized 300 to 500 gallons of waste oil, solvents, and waste fuels (AVGAS and JP-4) per training session. The fire training site consisted of a 5,000ft² concrete pad, bermed on all sides, with an oil water separator and a salvaged aboveground storage tank in the center which was only used to simulate an aircraft. The bermed area contained POL-contaminated soil, and the soil on the south side of the bermed area was visibly stained from overflow. The berm was cracked in multiple locations.

This site is regulated by the GA Hazardous Site Response Act (HSI #10395), and includes the TCE-contaminated area of HAA-016. A Contamination Evaluation Report prepared in 1990 indicated that the soil and groundwater in the area surrounding the Fire Training Site had been contaminated. Additional field investigations were conducted in 1995 in order to prepare a remedial design and initiate contamination delineation, and in 1997, MW-07 was found to have free product. Additional site investigation was conducted in 1999/2000 to delineate contamination to background levels per GEPA requirements. Metals and SVOCs were detected in the soil and benzene was detected in the groundwater above action levels. This information was summarized in a Compliance Status Report (CSR) that was submitted to GEPA in March 2000. Review comments were received in Jan 2001, requiring additional site delineation in the northeast section of the site and to the south of the site.

An IRA was completed in 2nd QTR FY98 and consisted of removing all structures (i.e., concrete berm, OWS, simulated aircraft, a 20,000 gallon AST and associated piping) at the site and 5,000cy of contaminated soil.

Groundwater monitoring was initiated in FY98 and a belt skimmer (thin layer free product recovery) installed at MW-07 in 2nd QTR FY99. The free product was delineated around this well, the belt skimmer was removed, and a second soil removal (200 cy) was completed in 1st QTR FY04 with preparation of a CSR Addendum.

Additional investigation was conducted for groundwater and soil contamination and summarized in a revised CSR Addendum. This investigation identified a TCE source unrelated to HAA-001, which is defined under HAA-016. Sampling in preparation of the CSR identified 9 of 43 soil and groundwater samples with contaminant levels greater than residential standards (Type I-II Risk Reduction Standards). The revised CSR and its associated Addenda will be submitted to GEPA in 4th QTR FY04.

DAACG Subsite: This subsite includes asphalt rubble area in a wooded low-lying site. TCE degradation by-products are present in groundwater. Sixteen wells (vertical profiles) have been installed at the TCE plume site for delineation. Three additional permanent monitoring wells have been installed. A CSR Addendum was prepared to define this area and will include an updated risk reduction evaluation.

PROPOSED PLAN

Monitoring will be required for both the TCE and the benzene plumes until Type I and II (residential) standards have been met.

Installation-wide five year reviews will begin in FY05, and are funded under HAA-09 (includes sites HAA-01, -09, -13, -14, -15).

FORMER USTs AT BUILDING 728

HAA-03

SITE DESCRIPTION

HAA-003 includes 16 USTs at former Building 728 (bulk fuel farm), located near the intersection of Douglas Street and Duncan Road. The USTs were removed in 1994.

During the CAP-Part A conducted in 4th QTR FY95, free product was found at 1 permanent well at this site and a belt skimmer (free product recovery) was installed.

A CAP-Part B was conducted in FY97 and free product was encountered in 2 additional wells. The CAP-Part B report was approved in September 1998 by GEPD. The CAP-Part B report recommends that the soil contamination be addressed using Soil Vapor Extraction (SVE) and groundwater contamination be addressed using air sparging; however, pilot studies were initiated at the site in May 1999 to evaluate the effectiveness of oxygen injection (enhanced bioremediation), install additional free product recovery wells and removal systems, and to collect site specific data for design of an SVE system. The CAP Part B Addendum and First Annual Progress Report was submitted to GEPD in Aug 2000 and comments were received on April 30, 2001. This document allowed enhanced bioremediation and free product recovery to be the selected RA at the site (instead of the originally proposed SVE system). The 2nd - 4th Annual Progress Reports were submitted to GEPD in Sept 2001, Aug 2002, and Sept 2003 respectively.

The ongoing MATRIX oxygen injection system has been in operation since May 1999 and has significantly reduced the size of the dissolved plume (i.e., in May 1999 the area of benzene contamination in groundwater was 22,700ft² and had been reduced to 4,325ft² by April 2003; similarly, the area of free product encompassed 1,850ft² in May 1999 and by June 2001 it was all removed).

Purging and cleaning of ~3,850ft of 12 inch pipe at Line A and ~5,850ft of 8 inch pipe at Line B, both of which originated at the Former Tank Farm located at former Bldg 728 was also completed, and contaminated soil was removed from three valve box locations in FY02.

Five shallow piezometers were installed in FY03 in order to delineate contamination in groundwater surrounding existing monitoring point D-9. Currently only two wells are above the ACL of 78 ug/L (D-9 is at 569 ug/L and D-4 is at 412 ug/L). The installation of three additional oxygen injection points was completed in the 1st QTR FY04 and was contracted for the final six months of operation. However, these points were accidentally destroyed by a construction crew shortly after installation. This could delay site closure by approximately one year.

This site is scheduled for a MILCON Ranger barracks project in FY05.

STATUS

REGULATORY: USTMP

RRSE RATING: High

CONTAMINANTS: VOCs, SVOCs, TPH

MEDIA OF CONCERN:
Soil, Groundwater

COMPLETED IRP PHASE:
PA/SI, RI/FS (Cap-Part A&B), 3 IRAs, RA(C)

CURRENT IRP PHASE: RA(O)

FUTURE IRP PHASE: RC

FORMER USTs AT BUILDING 728, *continued*

HAA-03

PROPOSED PLAN

The installation is coordinating with the MILCON project in regards to turning over the site for a large scale construction project. At this time no additional work at this site will be conducted other than monitoring of groundwater.

FORMER USTs AT BUILDING 133

HAA-03B

SITE DESCRIPTION

HAA-03B included six USTs at former Building 133 (AAFES gas station), located on Barksdale Circle. There is an underground storm water line that transects the site and is considered a “preferential pathway” for contamination migration by GEPD. The USTs and contaminated soil were removed.

A CAP was submitted to GEPD in Jan 1996 delineating site contamination which is migrating along the storm water line. Approval was received in Jan 1997 to implement long term monitoring.

In 3rd QTR FY99, free product delineation was conducted at the site and product was found to be limited to monitoring well PX-1 (~0.1 foot) and PX-1R (a sheen). A Ferret system (active bladder pump recovery) was installed in 4th QTR FY00 and was taken out of service in Feb 2001. Approximately one to two gallons of product was recovered.

Groundwater monitoring is being conducted on a semi-annual basis. A progress report (4th Annual) was submitted to GEPD in 3rd QTR FY00 that summarized the site specific fate and transport model and recommended alternate remedial levels for soil and groundwater.

A soil IRA was conducted in FY01 and removed 881cy of contaminated soil and replaced four wells. Confirmatory sampling indicated benzene in excess of 160ppb remains in soil at the bottom of the excavation.

The 5th Annual Progress Report was submitted to GEPD in 3rd QTR FY01 and recommends continued onsite monitoring and/or hot spot groundwater treatment.

In FY02, the vertical extent of the contamination was delineated. Purging and cleaning (pig & cap) of Pipeline B (funded under HAA-03) that cuts through the site was completed and the 6th Annual Monitoring-Only Report was submitted with a modified Alternate Concentration Level (ACL) of 255 ug/L. The 7th Annual Monitoring-Only Report was submitted in 3rd QTR FY03. An air sparging system was installed in 4th QTR FY03 and full scale operation began 2nd QTR FY04. The operation of this system is contracted for a period of six months with an option for an additional six months.

The contaminated plume extends into the Ranger barracks MILCON site, for which construction will begin in late FY04.

STATUS

REGULATORY: USTMP

RRSE RATING: High

CONTAMINANTS: BTEX, PAHs

MEDIA OF CONCERN: Soil, Groundwater

COMPLETED IRP PHASE: PA/SI, RI/FS, 3 IRAs, RA(C)

CURRENT IRP PHASE: RA(O)

FUTURE IRP PHASE: RA(O)

Site Description continues next page

FORMER USTs AT BUILDING 133, *continued* HAA-03B

PROPOSED PLAN

Dependent on the outcome of the first six months of operation, air sparging may continue for an additional six months followed by two years of performance monitoring through FY06. System removal is planned for FY07.

BULK FUEL FACILITY

HAA-09

SITE DESCRIPTION

The bulk fuel farm at HAAF consisted of five ASTs ranging in size from 500,000 to 1,500,000 gallons and two USTs (500 gallon defuel, 2,000 gallon emergency overflow). The USTs were removed in 1999 and three of the ASTs were removed in 2001. The facility's dimensions are ~600 x 1200ft. A number of releases have occurred from this facility since its construction in 1950. A few of the releases are known to have impacted the adjacent wetlands and nearby Forest River via Lamar Canal which is located ~50 ft south of the site boundary.

The bulk fuel farm has been used to store JP-4, MOGAS, #2 Fuel Oil, and Aviation Gas in the past. It is currently used to store JP-8. The active part of the facility (two ASTs and associated pipelines) were rehabilitated in 2000 and now meets all state and federal guidelines.

Soil samples were collected at this site in FY97 indicated high levels of BTEX components. Specifically, the concentration of benzene in groundwater exceeded MCLs and can be attributed to the former storage of MOGAS and AVGAS. Therefore, this site is being investigated under ER,A due to the fact that contamination is from MOGAS and AVGAS storage at the facility through 1974. Groundwater samples were taken in July 2002 and January 2003 as part of the Monitoring Only program for Release #1. During the facility upgrade a passive soil gas survey (GoreSorber) was conducted in 1st QTR FY99 and indicated high levels or a "hot spot" of petroleum contamination in soil. This "hot spot" was detected around AST (Facility 7009) prior to renovation and reactivation, but nothing of significance was indicated in installed monitoring wells.

A CAP-Part A investigation was conducted in 2nd QTR FY00 with the report approved by GEPD USTMP in Sept 2000. The site has five two-inch monitoring wells and thirty-one 3/4-inch monitoring wells.

A CAP Part-B report identifying Release #1 was submitted to GEPD USTMP in 4th QTR FY01. The maximum groundwater benzene concentration (553ppb) is less than the proposed site ACL of 820ppb and the maximum soil concentration (1.130ppm) exceeds the site ACL of 0.387ppb in one sample. Groundwater samples were taken in July 2002 and January 2003 as part of the Monitoring Only program for Release #1. A passive soil gas (GoreSorber) survey was conducted in 1st QTR FY99 and indicated high levels of petroleum contamination in soil and groundwater. A "hot spot" was detected around the AST (Facility 7009) prior to renovation and reactivation, but nothing of significance was indicated in nearby monitoring wells. During the groundwater monitoring activities associated with Release #1 in July 02 and January 03, free phase product (1/10th of an inch) was discovered in monitoring well MW-5 and is near AST 7009 where the "hot spot" was detected in 1999. This well that has free phase product is not associated with the monitored benzene plume (designated as Release #1) and was used to gather piezometric data for the site. The newly identified free product area has been designated as Release #2 and was reported to GEPD in the 1st Annual Monitoring Only Report as Release #2 in the 4th QTR 03. This discovery requires further delineation and removal of the free phase product. The GEPD granted a NFAR status for Release #1 in 1st QTR 04.

A fuel profile was performed in FY04 on free phase product associated with Release #2 along with further delineation and removal. Sentinel wells were installed outside the bermed area.

STATUS

REGULATORY: USTMP

RRSE RATING: High

CONTAMINANTS: VOCs, SVOCs, TPH

MEDIA OF CONCERN: Soil, Groundwater, Sediment

COMPLETED IRP PHASE: PA/SI, RI/FS, RA(C)

CURRENT IRP PHASE: RA(O)

FUTURE IRP PHASE: RA(O)

PROPOSED PLAN

Release #1: Abandon ~30 wells.

Release #2: Conduct semi-annual groundwater monitoring with passive free product recovery as needed for two years. Should the free product be observed in subsequent monitoring events, continued passive free product recovery will be performed indefinitely.

Installation-wide five year reviews will begin in FY05, and are funded under this site (includes sites HAA-01, -09, -13, -14, -15).

FORMER PDO FACILITY

HAA-12

SITE DESCRIPTION

The former Property Disposal Office (PDO) facility is located near the northwestern boundary of HAAF. This fenced site (136 x 300 ft) includes a 1,000ft² section currently used as the 90-day hazardous waste storage facility for HAAF. Current activities have not contributed to contamination at this site. Lead, benzene, and PCE associated with past activities have been identified in the groundwater.

A small section of the site was used as an accumulation point for used oil and off-specification JP-8. Approximately 1,100cy of contaminated soil was removed from this area in July 1998.

In 1994, a Consent Order was signed by the Commanding General and included violations at this site. In June 1997, the Installation submitted a Compliance Status Report (CSR) to GEPA HSRA Group requesting that the site be delisted and assigned a no further action status. In Dec 1997, GEPA HSRA Group completed their review of the CSR disagreeing with the NFA recommendation. However in March 1998, HSRA turned the project over to the RCRA Compliance Group due to the outstanding consent order.

In May 1998, review comments on the final RI report were received from the RCRA Compliance Group. Four additional shallow and 3 deep wells were installed in Aug 1998, confirming the presence of benzene and PCE above their respective MCLs. A final Revised Final RI was generated and recommended the preparation of a CAP. The RFI was approved by GEPA in Dec 1999. The CAP was submitted to GEPA and was approved in July 2000.

In March 2001, Fenton's reagent was injected into the PCE plume, and confirmatory sampling indicated that PCE concentrations in 2 wells exceeded the MCL of 5ppb. Therefore, a second treatment was conducted in the vicinity of those wells in May 2001. Confirmatory sampling indicated concentrations still exceed the MCL in a small area. The treatments reduced the areal extent of the PCE plume by ~90%. In the 2nd QTR FY02, another round of treatment (polishing step) was completed. The 2nd through the 6th CAP Progress Reports were submitted to GEPA in 1st QTR FY02, 2nd QTR FY03, 1st and 2nd QTR FY04.

Contaminant levels have remained slightly above action levels in two wells for each of the two plumes during the last three semi-annual sampling events.

STATUS

REGULATORY: RCRA

RRSE RATING: High

CONTAMINANTS: VOCs, SVOCs

MEDIA OF CONCERN:

Soil, Groundwater

COMPLETED IRP PHASE:

PA/SI, RI/FS, 3 IRAs, RA(C)

CURRENT IRP PHASE: RA(O)

FUTURE IRP PHASE: RA(O)

PROPOSED PLAN

Conduct one year of semi-annual confirmatory sampling to demonstrate that the asymptotic limit has been reached. The injection system will be dismantled and removed in FY06.

PUMP HOUSES #1, #2, AND #6

HAA-13

SITE DESCRIPTION

This project consists of 32 USTs located at three pump houses (PH). The pump houses were taken out of service in 1973. Removal of 16 USTs located at Pump Houses #1 and #2 was completed in FY95. Fourteen of the remaining USTs at this site were removed and two defueling tanks, with all associated piping, were closed in-place in Jun 1998. In addition, CAP-Part As were submitted to GEPD in May 97 for each PH (#1, #2, and #6) and have been approved.

NOTE: Further investigations of the DAACG/Airfield site (HAA-11) will be conducted under this project, due to the fact that the groundwater BTEX plumes are contiguous.

A CAP-Part B for PH #6 recommending NFA was approved by GEPD in Nov 98.

Representatives from GEPD, Fort Stewart and the COE met in January 1999 to discuss proposed site actions. GEPD requested additional surface water sampling in order to determine whether or not imminent corrective action was required to prevent contamination of the adjacent canals. In addition, GEPD directed that the adjacent canals are the points of compliance for the site and agreed that IWQS were appropriate ARARs. Supplemental sampling data was submitted in March 1999 and supported Fort Stewart's request to perform Fate and Transport Modeling as an evaluation tool in the CAP-Part B report.

Passive free product removal at PH #2 was started in 1st QTR FY00. Additional field investigation and aquifer testing was performed in 1st QTR FY00 at both PHs and the information documented in CAP-Part Bs for PHs #1 & #2. The CAP-Part B for PH #2, recommending 6-phase heating treatment, was approved by GEPD in Nov 00. The CAP-Part B for PH #1 was approved by GEPD in Dec 00. The report recommended monitored natural attenuation for the PH #1 first release area (P1), and additional investigation of the PH#1's second release area, the DAACG Area (D), due to the presence of recently identified significant amount of free product (~21,000 gallons). Subsequently, free product has been discovered in P1 monitoring wells that previously had high dissolved-phase concentrations. Free product from both P and D sites is being recovered from the free product wells (total of 62).

The field work for 6-phase heating at PH #2 began in 4th QTR FY01. This system operated from the 3rd to the 4th QTR FY02. Performance sampling and one round of confirmatory sampling was conducted in FY03 (with favorable results - below the ACL of 469 ug/L). Performance monitoring continued through FY04. The Second Progress Report was submitted 2nd QTR FY04. Rebound was observed in three wells slightly above the ACL.

The additional free product delineation conducted at D in FY01, indicates a large (ie. 147,500ft² [~four acres] as of July 01) source area directly beneath the West Ramp, which is used for all aircraft unloading and loading operations. The mission-essential use of this area limits remedial alternatives for this site. Large scale groundwater extraction may cause subsidence problems. In May 2003, GEPD recommended periodic free product recovery (vacuum truck extraction) operations.

STATUS

REGULATORY: USTMP

RRSE RATING: High

CONTAMINANTS: VOCs, SVOCs, TPH

MEDIA OF CONCERN:

Soil, Groundwater, Surface Water

COMPLETED IRP PHASE:

PA/SI, RI/FS, RD/RA (USTs), RD/RA (6-phase), 3 IRAs

CURRENT IRP PHASE: RA(O)

FUTURE IRP PHASE: RA(O)

PROPOSED PLAN

PH #1 :

P1: Performance monitoring of 14 wells.

D: Conduct active free product recovery on the apron to maintain plume stability. Sentinel wells are being monitored along with selected downgradient monitoring wells. A total fluid extraction system for free product removal will be considered as needed (cost not projected).

PH #2: Two years of performance monitoring will be conducted in FY05 & 06. Decommissioning of ~75 wells will be performed in FY07.

PH #6 is response complete.

Installation-wide five year reviews will begin in FY05, and are funded under HAA-09 (includes sites HAA-01, -09, -13, -14, -15).

MCA BARRACKS SITE

HAA-15

SITE DESCRIPTION

This site is regulated by the GA Hazardous Site Response Act (HSI #10521). It is located north of Lightning Road, west of Mitchell Blvd, east of Griffen St. and south of Cook Blvd. The estimated 75 acre site contains a 10 acre man-made pond and is approximately 0.5 miles and 1.5 miles from the installation's two main potable water wells (Well #1 and Well #2 respectively), which are screened at a considerably lower depth than the contaminated surficial groundwater.

In July 2000, contamination of TCE, DCE, PCE and vinyl chloride at concentrations exceeding action levels (ppm range) were detected. The chlorinated solvent contamination extends from 6 to 50 ft bgs. Contamination has been identified in groundwater only and the source of contamination is unknown. The most probable source of contamination is former aircraft maintenance operations at Bldgs 811, 813, 843, 844 and/or 845 and/or a former fuel/de-icing fluid transfer line located in the area.

In FY01, subsurface geophysical studies were conducted to assist in defining a sampling strategy and 10 vertical profiles/ deep wells were installed in 4th QTR FY01. In FY02, additional wells were installed and purging of pipelines A & B (funded under HAA-03) were completed.

In FY04, historical investigation is ongoing but has identified the potential of a former hospital and motor pool in the area to be a possible source. Direct push screening of soil at five-foot intervals with groundwater sampling at discrete intervals from the water table to 45 ft bgs was conducted at 20 locations beyond the previously defined site boundary. TCE was identified at multiple locations. However, additional sampling will be required to determine if these are discrete or part of a continuous plume. No major source has yet been identified. The production well and pond remain uncontaminated.

An archive search was conducted in FY04 in an attempt to identify the source of the contamination. In 3rd QTR FY04 a Performance-Based Contract will be awarded to perform all required investigation and remedial action.

STATUS

REGULATORY: HSRA

RRSE RATING: High

CONTAMINANTS: VOCs

MEDIA OF CONCERN:

Groundwater

COMPLETED IRP PHASE: PA/SI

CURRENT IRP PHASE: RI/FS,
LTM

FUTURE IRP PHASE: RI/FS, LTM

PROPOSED PLAN

Continue to conduct search for archival information.

All of the following is subject to change based on the awarding of the Performance-Based Contract.

Phase I subsurface investigations, and hydrogeological survey, incorporating results from archive search, to determine nature and extent of the contamination as well as monitor the production well (to include Well #2). Limited in situ treatment may be necessary. A CSR may be developed followed by LTM until risk reduction standards are met.

TCE contamination found at the former USTs 25/26 site (HAA-14) will be investigated under this site.

Installation-wide five year reviews will begin in FY05, and are funded under HAA-09 (includes sites HAA-01, -09, -13, -14, -15).

2005 IAP

Hunter Army Airfield ER,A Response Complete Site Descriptions

PCB STORAGE AT DEH STG YD BHND BLD 1024

HAA-02

SITE DESCRIPTION

HAA-02 is located behind Building 1024 on the northern end of HAAF. The site is an outside storage area which contains various new construction materials. The area is surrounded by an eight foot high chain-link fence topped with barbed wire. The surface inside the storage area is asphalt. A large drainage canal is present behind the storage yard. No signs of contamination or environmental impact were observed at the site during the RCRA Facility Assessment. Based on the RFA, Fort Stewart/HAAF considers this site Response Complete.

STATUS

RRSE RATING: NE
CONTAMINANTS: PCBs
MEDIA OF CONCERN: Soil, Groundwater, Surface Water
COMPLETED IRP PHASE: PA/SI
CURRENT IRP PHASE: RC
FUTURE IRP PHASE: RC
RC DATE: 1983

FORMER USTs AT BLD 710

HAA-03C

SITE DESCRIPTION

HAA-03C includes four USTs at former Building 710 (fuel dispensing facility), located near the intersection of Douglas Street and Moore Road adjacent to the drinking water supply well located at Building 712. Removal of the USTs was completed in FY94.

Six permanent monitoring wells exist at this site and have been sampled on a quarterly basis since 1st QTR FY96.

The CAP was submitted to GEPD in January 1996 and a Completion Report was submitted in July 1996 with a recommendation for LTM. Approval was received from GEPD in February 1999.

Long term monitoring is being conducted on a quarterly basis with annual progress reports submitted to GEPD. A progress report was submitted to GEPD in 3rd QTR FY00 that summarized the site specific fate and transport model and recommended alternate remedial levels for soil and groundwater. GEPD has reviewed the progress report and has approved the site for No Further Action (Sept 2000).

STATUS

RRSE RATING: High
CONTAMINANTS: BTEX, PAHs
MEDIA OF CONCERN: Soil, Groundwater, Surface Water
COMPLETED IRP PHASE: PA/SI, Phase I RI, IRA
CURRENT IRP PHASE: RC
FUTURE IRP PHASE: RC
RC DATE: 2000

PHOTO LABS BLD 1287, 332

HAA-06

SITE DESCRIPTION

This site consisted of two photo labs located in Buildings 1287 and 332. One of the labs was used for ‘hobby’ type activities by military personnel and their dependents (Building 1287) while the other was used for all other military requirements (Building 332). Building 1287 is located on Neal Street, just west of the theater and bowling alley. Building 332 is located at the intersection of Douglas Street and Zettell Street.

No signs of contamination or environmental impact were observed at either lab during the RCRA Facility Assessment. Based on the RFA, Fort Stewart/HAAF considers this site Response Complete.

STATUS

RRSE RATING: NE
CONTAMINANTS: Metals
MEDIA OF CONCERN: Soil, Groundwater
COMPLETED IRP PHASE: PA/SI
CURRENT IRP PHASE: RC
FUTURE IRP PHASE: RC
RC DATE: 1983

FORMER BLD 1022 PESTICIDE STORAGE

HAA-07

SITE DESCRIPTION

HAA-07 was one of the two main pesticide storage areas on Hunter Army Airfield. It was used for storage of pesticides and for preparation of pesticide solutions. The facility was well managed and extremely organized. The building was located at the far northern end of Duncan Drive and contained office space on either side of the storage and preparation room. The building has since been razed and grass has been planted over the site.

No signs of contamination or environmental impact was observed at this site during the RCRA Facility Assessment. Based on the RFA, Fort Stewart/HAAF considers this site Response Complete.

STATUS

RRSE RATING: NE
CONTAMINANTS: Pesticides
MEDIA OF CONCERN: Soil, Groundwater
COMPLETED IRP PHASE: PA/SI
CURRENT IRP PHASE: RC
FUTURE IRP PHASE: RC
RC DATE: 1983

BLD 1029 FORMER PESTICIDE STORAGE AREA

HAA-08

SITE DESCRIPTION

Building 1029, a former pesticide storage area, is located adjacent to the location of former Building 1022 (HAA-07) at the northern end of Duncan Drive. It is a free-standing building and has an asphalt bermed mixing area in front. The drain in the mixing area emptied into Lamar Canal at the back of the building and has been grouted closed. The building was primarily used for the storage of herbicides. There is some indication that strong rain may cause puddles inside the building. The herbicide containers were elevated to avoid contact with this water.

No signs of contamination or environmental impact was observed at this site during the RCRA Facility Assessment. Based on the RFA, Fort Stewart/HAAF considers this site Response Complete.

STATUS

RRSE RATING: NE

CONTAMINANTS: Pesticides

MEDIA OF CONCERN: Soil, Groundwater, Surface Water

COMPLETED IRP PHASE: PA/SI

CURRENT IRP PHASE: RC

FUTURE IRP PHASE: RC

RC DATE: 1983

FORMER SANITARY LANDFILL

HAA-10

SITE DESCRIPTION

The former sanitary landfill, which was closed in 1980, was located at the west end of the runway, west of the fire training pit, and encompasses approximately 25-30 acres. It was used for municipal solid waste including dewatered sludge from HAAF's STP (HAA-04), and was filled using the trench method. The landfill was 20 ft deep and a 3 ft clay cap was installed prior to final closure. The area is now covered with grass and scrub pines. Upon closure of the landfill, GEPR conducted sampling and temporary wells exist at the site.

No signs of contamination or environmental impact were observed at this site during the RCRA Facility Assessment. Based on the RFA, Fort Stewart/HAAF considers this site Response Complete.

STATUS

RRSE RATING: NE

CONTAMINANTS: Metals, VOCs

MEDIA OF CONCERN: Soil, Groundwater

COMPLETED IRP PHASE: PA/SI

CURRENT IRP PHASE: RC

FUTURE IRP PHASE: RC

RC DATE: 1983

SITE DESCRIPTION

The Departure/Arrival Air Control Group (DAACG) site was discovered when a fire broke out during the replacement of an old storm drain. The suspected contaminant is Aviation Fuel. This project was added to the Hunter Army Airfield list of ER,A projects on February 13, 1995. A site investigation of the area has been completed and two well-defined BTEX plumes identified. The DAACG and HAA-13 plumes are overlapping. The plumes are associated with past airfield fueling activities, in the vicinity of the flight line, conducted from 1950-1973.

Future response actions at HAA-11 will be incorporated under the Pump House #1, #2, and #6 (HAA-13) project due to the circumstances described previously.

STATUS

RRSE RATING: High

CONTAMINANTS: Metals, VOCs, SVOCs, TPH

MEDIA OF CONCERN: Soil, Groundwater, Surface Water

COMPLETED IRP PHASE: PA/SI, RI

CURRENT IRP PHASE: RC

FUTURE IRP PHASE: RC

RC DATE: 1997

FORMER AIRFIELD AREA UST SITES

HAA-14

SITE DESCRIPTION

This project consists of 20 former underground storage tanks. When the tanks were removed, soil contamination was confirmed at each of these sites. Under Georgia UST Regulations, corrective action was required. Additional investigations were conducted at USTs 29, 104, 110, 111 and 1 UST at the 117th Air National Guard Facility for completion of the closure report submitted in 4th QTR FY99. CAP-Part A field investigations were completed in Mar 1998 at USTs 21/22, 27/28, 108, 109, 112, 116, and 1 UST at the 117th Air National Guard Facility, 1 UST at Bldg 725, and 2 USTs at Bldg 850. Free product was identified at USTs 108 and 21/22. In addition a CAP-Part A investigation was completed at UST 25/26 in Feb 1999. CAP-Part B investigations were completed at USTs 108, 21/22 and 25/26 in FY99. The USTs 25/26 site indicated both benzene and TCE contamination in the aquifer. The CAP-Part B reports were submitted to GEPD in 1st QTR FY00.

USTs 21/22, 27/28, 108, 109, 112 and 116 were approved by GEPD for NFA.

USTs 25/26 were approved, by GEPD, for monitoring only for the benzene plume and further investigation of the TCE plume. The 1st Annual Monitoring Only Report was submitted to GEPD in 4th QTR FY01 and recommends semi-annual monitoring for a minimum of one more year. A subsurface investigation of the TCE-plume at USTs 25/26 was conducted in conjunction with resistivity studies done by Argonne National Labs to determine the source and extent of contamination. This information was summarized in a CAP-Part B Addendum and submitted to GEPD in Jul 2001. Additional delineation of the vertical and horizontal extent of the TCE contamination to distinguish it as a separate release from the UST was performed in 4th QTR 2003.

NOTE: One UST at the 117th Air National Guard Facility, 1 UST at Bldg 725, and 2 USTs at Bldg 850 were non-regulated heating oil tanks and the CAP-Part As were not required to be submitted to GEPD. All identified releases have been modeled and do not pose risk to human health or the environment. No further action is required at these sites at this time based on known site conditions and current GA Rules and Regulations. In addition, UST 117, which is included in this site, is being investigated as part of HAA-09 (Bulk Fuel Facility) because it is located there.

STATUS

RRSE RATING: High

CONTAMINANTS: Benzene, TCE

MEDIA OF CONCERN: Soil, Groundwater, Surface Water

COMPLETED IRP PHASE: PA/SI, IRA, RI/FS

CURRENT IRP PHASE: RC

FUTURE IRP PHASE: RC

RC DATE: 2002

Site Description continues next page

FORMER AIRFIELD AREA UST SITES, *continued*

HAA-14

PROPOSED PLAN

This site is Response Complete. Further TCE delineation will be conducted and funded under HAA-15. Installation-wide five year reviews will begin in FY05, and are funded under HAA-09 (includes sites HAA-01, -09, -13, -14, -15).

DAACG AREA CHLORINATED SOLVENTS

HAA-16

SITE DESCRIPTION

This site is located east of the Former Fire Training Site and northwest of the DAACG along Lightning Road. This site is regulated by the GA Hazardous Site Response Act (HSI #10395), as part of the larger site which includes HAA-01. Consequently this site is being added to HAA-001 for further investigation and funding.

1,2-Dichloroethylene (cis and trans) (DCE) was identified in soil and groundwater (one deep well) during the HAA-01 Jan 2000 investigation. An additional well was installed and sampled in spring 2001 which identified DCE at least 40ft bgs. Soil contamination levels were in the ppm range and groundwater contamination levels were in the ppb range, above action levels.

This site was combined with HAA-01 for further investigation and funding.

STATUS

RRSE RATING: High

CONTAMINANTS: VOCs, SVOCs, TPH

MEDIA OF CONCERN: Soil, Groundwater

COMPLETED IRP PHASE: PA/SI, RI

CURRENT IRP PHASE: RC

FUTURE IRP PHASE: RC

RC DATE: 2003

2005 IAP

Hunter Army Airfield
Non-ER,A Response
Complete Site Descriptions

SEW TRT PLANT HAA-04

SITE DESCRIPTION

The Sewage Treatment Plant (STP), HAA-04, is located off of Douglas Street on the north end of the installation near Gate No. 5. The STP receives and treats all wastewater generated on HAAF, including industrial wastewater from wash racks. Three previous remote area package plants have been abandoned, and the discharges connected to the main STP. The plant treats an average flow of 1.5 million gallons per day. The 1950s plant has been modified several times. Two anaerobic digesters at the plant have recently been converted to aerobic digesters. Sludge is dried on site and delivered to an off post, commercial Subtitle D landfill for disposal. In July 1991, the HAAF effluent was diverted to join with the City of Savannah's Wilshire Street STP's effluent. The combined effluent flow discharges to the Savannah River.

This site is active and therefore, is not eligible for ER,A funding.

STATUS

RRSE RATING: NE

CONTAMINANTS: Metals

MEDIA OF CONCERN: Soil,
Surface Water

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

FUTURE PHASE: RC

AIRCRAFT WSH RACKS OW SEP HAA-05

SITE DESCRIPTION

The Aircraft Wash Rack Oil Water Separator, HAA-05, is located adjacent to the wash rack at Building 850. The site consists of six wash areas used for cleaning aircraft, primarily helicopters, which are housed in the adjacent hangars. Only three of the six wash areas are currently operational. The wash areas drain through two catch basins to an oil/water separator. A diversion box has been installed to direct the flow from the catch basins to the separator and prevent direct flow to the sanitary sewer.

No signs of contamination or environmental impact were observed at the site during the RCRA Facility Assessment. Based on the RFA, Fort Stewart/HAAF considers this site Response Complete.

In addition, this site is currently active and, therefore, is not eligible for ER,A funding.

STATUS

RRSE RATING: NE

CONTAMINANTS: POL

MEDIA OF CONCERN:
Soil, Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

FUTURE PHASE: RC

PAST MILESTONES

1983

- IRP Assessment Initiation - October
- SI, Building 728, (HAA-03) - October

1987

- PA/SI, Installation - April

1991

- CAP, Building 710, (HAA-03) - October

1992

- PA/SI, Installation - February

1993

- CAP and RD, Building 710, (HAA-03) - August
- Feasibility Study (FS), (HAA-01) - September
- CAP & RD, Building 133, (HAA-03) - September

1994

- Preliminary Assessment (PA), (HAA-12) - January
- Removal Action (REM), Building 728, (HAA-03) - September
- Phase I CA, Building 710, (HAA-03) - November

1995

- Phase II Corrective Action (CA), Building 133, (HAA-03) - February
- Removal Action (REM), Pump Stations 1 & 2 (HAA-03) - July
- Removal Action (REM), Pump Station 6 (HAA-13) - July
- Removal Design (REM), Building 728, (HAA-03) - October

1996

- Remedial Design (RD), (HAA-01) - March
- Site Investigation (SI), DAACG Site, (HAA-11) - September

1997

- Remedial Action (RA), (HAA-01) - May
- Site Investigation (SI), (HAA-14) - September
- Remedial Action (RA), (HAA-03) - December
- Remedial Design, Pump House #6 (HAA-13)

1998

- SI, Pump Houses #1,#2, & #6, (HAA-13)
- SI-CAP Part B, Building 728, (HAA-03)
- RA (Free Product Removal), Building 728, (HAA-03)
- Long Term Monitoring (LTM) @ 4 ER,A sites

1999

- RI/FS at HAA-01, 09, 12, 13, 14
- RD, RA at HAA-03
- LTM at HAA-01, 03, 03B, 03C, 12

2000

- RI/FS at HAA-01, 03, 09, 12, 13, 14
- LTM at HAA-03B, 03C, 13, 14

2001

- RI/FS at HAA-01, 03, 09, 13, 14, 15
- RA(O) at HAA-03B
- FRA at HAA-12
- IRA at HAA-13
- LTM at HAA-14

2002

- PA/SI at HAA-16
- RI/FS at HAA-01, 13, 14, 15
- RA at HAA-03, 12, 13
- RA(O) at HAA-03B
- LTM at HAA-09

2003

- RI/FS at HAA-15, 16
- RA at HAA-03B, 03
- RA(O) at HAA-12, 13
- LTM at HAA-09, 14

2004

- RI/FS at HAA-15
- RA at HAA-01, 03
- RA(O) at HAA-3B, 09, 12, 13

Schedule

PROJECTED MILESTONES

- RI/FS at HAA-15 (FY05)
- RA(O) at HAA-01, 03, 03B, 09, 12, 13 (FY05)
- LTM at HAA-15 (FY05)

Year of IRP Completion Excluding LTM: 2006

Year of IRP Completion Including LTM: 2015

NO FURTHER ACTION SITES

The following sites currently require no further action:

HAA-02	PCB STG DEH STG YD BHND BLD 1024
HAA-03C	FORMER USTS AT BLDG 710
HAA-04	SEW TRT PLANT
HAA-05	AIRCRAFT WSH RACKS OW SEP
HAA-06	PHOTO LABS BLD 1287, 332
HAA-07	FORMER BLD 1022 PESTICIDE STORAGE
HAA-08	BUILDING 1029 FORMER PESTICIDE STORAGE AREA
HAA-10	FORMER SANITARY LANDFILL
HAA-11	DAACG/AIRFIELD INVESTIGATION
HAA-14	FORMER AIRFIELD AREA UST SITES
HAA-16	DAACG AREA CHLORINATED SOLVENTS

Fort Knox Military Reservation Installation Action Plan Schedule

(based on Cost-to-Complete current funding constraints)

CURRENT PHASE

FUTURE PHASE

AEDB-R #	SITE NAME	RRSE	PHASE	FY05	FY06	FY07	FY08	FY09	FY10	FY11+
FTKX-01	Closed Landfill (9th and Wilson)	High	RA(C)							
			RA(O)							
FTKX-02	Residential Landfill	High	LTM							
FTKX-10	WWTP Sludge Lagoons (2)	High	RI/FS							
			RD							
			RA(C)							
			LTM							
FTKX-15D	UST Site 2823 Investigation/REM	High	RI/FS							
			RD							
			RA(C)							
			LTM							
FTKX-020	DRMO Former Waste Oil Tank Site	High	RI/FS							
			LTM							
FTKX-21	Boatwright Maintenance Area Near Bldg 2775	High	RI/FS							
			RD							
			RA(C)							
			LTM							
FTKX-22	Bldg. T-112 UST Pesticide	High	RI/FS							
			LTM							
FTKX-24	Fire Fighter Training Area	Med	RI/FS							
			RD							
			RA(C)							
FTKX-30	Tioga Springs EOD Site	High	RD							
			RA(C)							
FTKX-40	UST 1473-A Site Closure	High	LTM							

Remediation Activities

COMPLETED REM/IRA/RA:

UST Removals

UST removals and/or in-place closures at Pump Houses #1, #2 & #6 (HAA-13), Building 728 (HAA-03), Building 710 (HAA-03C), and all of the USTs associated with HAA-14, Building 133 constituted an interim removal action.

Removal of Structures and Contaminated Soil at HAA-01

The removal of all structures (i.e. concrete berm, OWS, simulated aircraft, 20,000 gallon AST, and associated piping) and approximately 5,000 cubic yards was completed in 2nd QTR FY98.

Free Product Removal

- Former Building 133 (HAA-03B), Pump House #1 and #2 (HAA-13), and the Fire Training Area (HAA-01).
- HAA-13 - 6-phase heating to remediate free product and contaminated soil and groundwater.

CURRENT REM/IRA/RA:

- HAA-03 - enhanced oxygen injection, product removal, pipeline purging and cleaning
- HAA-03B - testing of treatment alternatives, sampling, installation of air sparging system.
- HAA-12 - Fenton's reagent (TCE)
- HAA-13 - 6-phase heating to remediate free product and contaminated soil and groundwater; MNA for dissolved plume at PH #1
- HAA-15 - in-situ treatment of identified groundwater plumes (TCE and BTEX)

FUTURE REM/IRA/RA:

- HAA-13 - free product removal.
- HAA-03B, 15 - in situ treatment.

Community Involvement

RESTORATION ADVISORY BOARD (RAB) STATUS

Fort Stewart/HAAF conducted community interest surveys during FY97, FY00 and FY03 to evaluate community interest in the establishment of a Restoration Advisory Board (RAB). A public notification announcing Fort Stewart/HAAF's community interest survey for a RAB was published in *The Savannah Morning News* and *The Coastal Courier* on August 1997, June 2000 and May 2003. The individual surveys for public officials were mailed in September 1997, June 2000, and May 2003, respectively. To date, Fort Stewart/HAAF has not received sufficient response to these public notifications and mailings to warrant establishment of a RAB.

Fort Stewart/HAAF will continue to monitor the public's desire to form a RAB and will react accordingly. Surveys will be conducted on a regular basis to determine the public's interest in Hunter Army Airfield's IRP.

2005

Hunter AAF Installation Action Plan

2005

Hunter AAF Installation Action Plan

2005

Hunter AAF Installation Action Plan

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